

ABSTRACT

A process for producing a periodic structure comprises the steps of preparing a working object, the property of which changes in view of a
5 photoreaction caused by an exciting energy, generating a light having a photonic energy of intensity of one fraction of natural number divisions of the exciting energy by each of the light sources of light-source groups arranged regularly in a two-
10 dimensional arrangement, and concentrating the light emitted from the light source group at each of the light-concentrating points arranged at regular intervals in the working object to cause a photoreaction at and around the light-concentrating
15 point to form a periodic structure comprised of regions each of which has a changed property in the working object.